Commitment to the Community

The U.S. Army is committed to keeping the community informed of the environmental cleanup programs at NSSC and welcomes suggestions and imput from the public. A Restoration Advisory Board (RAB) comprised of community and government agency representatives has met regularly since 1995 to discuss environmental cleanup programs at the facility. At these meetings, community RAB members provide local input and offer suggestions on program activities. Upcoming RAB meetings are announced in local news media and are open to the public. The U.S. Army also holds public Environmental Open Houses at different venues in the town of Natick, and maintains a community mailing list for distributing information on the environmental programs at NSSC.

For more information, please contact:

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Community Representative
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Information Repository

Documents relating to environmental investigation and cleanup activities at NSSC are available for public review at:

Morse Institute Library
14 East Central Street
Natick, MA 01760
508-647-6520

Information about the NSSC facility from EPA:
www.epa.gov/region1/superfund/sites/naticklab

Information about the current Lake Cochituate Public Health Fish Advisory:
http://db.state.ma.us/dph/Fishadvisory/

Environmental Newsletter

May 2009

Status of Sediment and Fish Studies at Natick Soldier Systems Center

U.S. Army Natick Soldier Systems Center Superfund Site
Natick, Massachusetts

- *Can I swim, wade, and boat near Natick Labs?*
- *Are fish caught near Natick Labs safe to eat?*
- *Are birds and mammals at risk?*

This newsletter answers these questions and summarizes the current status of the environmental investigation activities in the South Pond of Lake Cochituate near the U.S. Army Natick Soldier Systems Center (NSSC) in Natick, Massachusetts. NSSC, also known as Natick Labs, is a research, development, and engineering facility, which was listed as a Superfund site in 1994. As part of the Superfund process, sediment and fish studies adjacent to the NSSC shoreline, in particular Pegan Cove of Lake Cochituate, began in the early 1990s and continue today.

South Pond of Lake Cochituate

Sediment Background

The sediment at NSSC is one of the areas identified for risk management or cleanup under the Superfund process. Portions of the shoreline were named as part of the Superfund site due to historic stormwater discharge directly into the lake. Over 50 years of stormwater runoff contributed to the presence of various chemicals in the sediment, including polychlorinated biphenyls (PCBs), pesticides, metals, and petroleum compounds. Elevated levels of PCBs were detected in sediment along the shoreline in Pegan Cove and are likely related to a release from an electrical transformer on the installation in the mid-1980s. During the 1990s, all active stormwater outfalls were fitted with oil-water separators to improve stormwater quality and minimize future impact to the lake. There are currently no known sources of PCBs to Lake Cochituate from the installation. However, there are other potential current and historic sources of environmental contaminants to Lake Cochituate not related to installation activities and, therefore, not part of the NSSC Superfund cleanup.

Data Collection & Risk Evaluation

To assess the potential impacts of military-related chemical releases on the lake, the U.S. Army conducted a Remedial Investigation (RI). A RI determines the extent and nature of contamination. Since 1993, the U.S. Army has collected and analyzed over 700 samples of sediment, surface water, mussels, and fish, and conducted sediment toxicity testing, benthic invertebrate surveys, wildlife surveys, and an angler survey. The fish and sediment sampling locations are shown in Figure 1. These studies found that there are elevated levels of PCBs present in sediment and fish adjacent to NSSC, but also across other portions of Lake Cochituate and Fisk Pond (located south of Route 135). Fisk Pond is at a higher elevation and flows into Lake Cochituate.

The data were used to conduct a human health risk assessment to evaluate the potential risks from swimming and wading and from ingesting fish collected near NSSC. An ecological risk assessment evaluating the potential risks to birds and mammals using the lake for foraging and as a food source also was conducted. Risk is a measure of the likelihood that people, plants, or animals may experience negative effects due to contact with or exposure to contamination. Factors associated with these risks include the type of contaminant, concentration of the contaminant, and duration of contact or exposure to the contaminant.

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The U.S. Army conducted these risk assessments with oversight by the U.S. Environmental Protection Agency (US EPA), the Massachusetts Department of Environmental Protection (MassDEP), and the U.S. Fish and Wildlife Service (USFWS).

The risk assessments were completed in the spring of 2009 and indicate the following:

- It is safe for adults and children to swim, wade, and boat along the Natick Labs shoreline. Estimated incremental risks are within or below the US EPA acceptable range.
- A Fish Consumption Advisory was issued by the Massachusetts Department of Public Health (MassDPH) in 1996 for all of Lake Cochituate and remains in effect today. Signs are posted around Lake Cochituate informing anglers of this. The advisory specifies that *(1) children younger than 12 years of age, pregnant women, women of childbearing age who may become pregnant, and nursing mothers should not eat any fish from this water body, and (2) the general public should not consume any American eel from this water body.*
- Under conservative assumptions, the potential risks associated with eating native fish species (e.g., large mouth bass) caught near the Natick Labs shoreline within Pegan Cove were determined to be slightly greater than the US EPA accceptable range. Since fish may take up contaminants from sediments, these estimated risks are the basis for the Army's evaluating various risk management options for addressing the contaminated sediments.
- Ecological risks due to contaminants from NSSC-associated sediments are negligible for bird and mammal species.

Evaluation of Risk Management Alternatives

In conjunction with the RI, the U.S. Army prepared a Feasibility Study (FS) to evaluate several possible risk management and cleanup alternatives to address the sediment associated with NSSC. Based on the results of the risk assessment and input from regulators and the public, the U.S. Army will select and implement a cleanup plan for the NSSC shoreline sediment in Pegan Cove in the summer of 2009. However, it is important to note that the U.S. Army is not legally allowed to clean up contaminated sediment in other portions of the Lake Cochituate system (including Fisk Pond) that are not related to U.S. Army activities. The potential cleanup alternatives that were evaluated include:

Alternative 1—No Action: No response to contamination would be made, activities previously initiated would be abandoned, and no active human intervention would occur. Natural recovery over time is the only means by which sediment quality would improve. Consideration of a No Action alternative is required under Superfund to serve as a baseline comparison for the other alternatives.

Alternative 2—Limited Action/Institutional Controls: Implement institutional controls, also called use restrictions, to prevent or reduce human exposure to sediment and fish near the NSSC shoreline. Institutional controls include maintaining current NSSC shoreline access restrictions (barbed wire fence and security monitoring), and developing and posting signs prohibiting fishing from or near NSSC and minimizing disturbance of the contaminated sediments. Any offshore institutional controls would be implemented and enforced through cooperative agreements between the U.S. Army and state agencies with jurisdiction over Lake Cochituate.

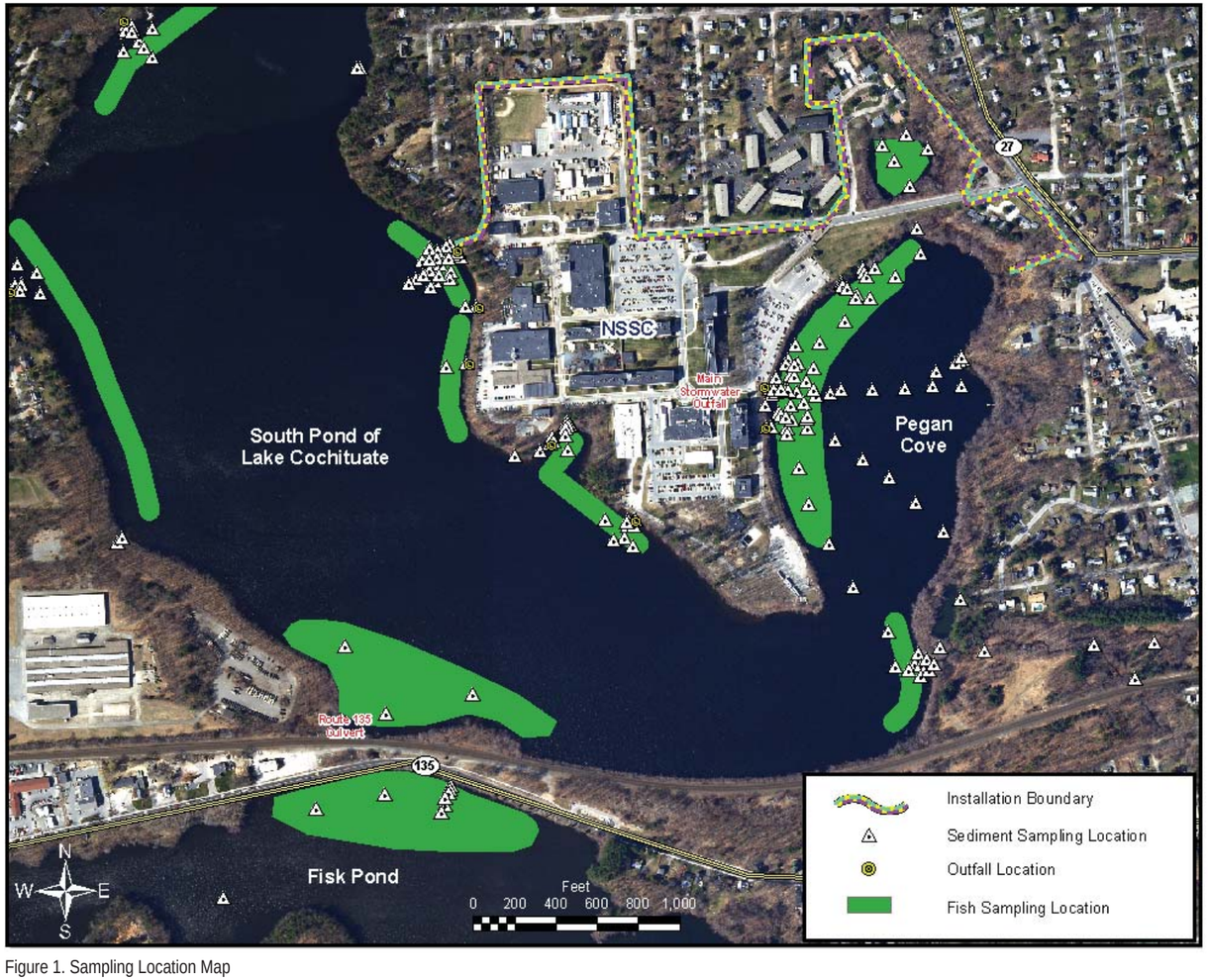

Figure 1. Sampling Location Map

Alternative 3—Institutional Controls/Environmental Monitoring: Includes institutional controls described in Alternative 2, along with long-term monitoring of sediment, fish, and surface water PCB concentrations, assessing the extent of natural recovery.

Alternatives 4 and 5—Capping/Monitoring/Institutional Controls: Sediment is covered with a clay cap or an engineered composite cap consisting of geotextile fabrics and sand materials, physically isolating and immobilizing it. Over time, natural recovery reduces the toxicity, mobility, and volume of the PCBs beneath the cap. These alternatives include institutional controls to reduce human exposure to fish caught near NSSC, along with prohibitions on anchoring, construction of docks or piers, and dredging, preventing damage to the cap. Long-term monitoring and maintenance ensure cap integrity and track the natural recovery of the lake sediment and fish.

Alternatives 6, 7, 8, and 9—Dredging/Off-Site Disposal/Institutional Controls: These alternatives involve dredging contaminated sediment using excavation or hydraulic methods, dewatering the removed sediment, and disposing of contaminated sediment at off-site, licensed facilities. These alternatives include institutional controls or other site control measures to prevent or reduce human exposure to sediment and fish near the NSSC shoreline.

Next Steps

The U.S. Army will release a Proposed Plan this spring, supported by the US EPA and MassDEP, describing the cleanup alternatives considered for the NSSC sediment. The Proposed Plan will present a cleanup plan that meets the goals of protecting human health and the environment while complying with all environmental laws and regulations.

The Proposed Plan will be presented at a public meeting and will be available for public review during a formal comment period. The U.S. Army is required to provide written responses to all formal comments. The responses will be provided in the Responsiveness Summary attached to a Record of Decision (ROD). The ROD documents the final cleanup decision regarding the sediment.

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